Task 24

1. What is delay?

2. Name two types of delay.

3. What era of music uses slapback delay? How many taps does a slapback delay have?

4. Below is a tape delay plugin. Briefly explain how a hardware tape delay unit works.

5. Explain what the following controls do on the plugin above.

Feedback

Tempo sync

Low Cut/High Cut

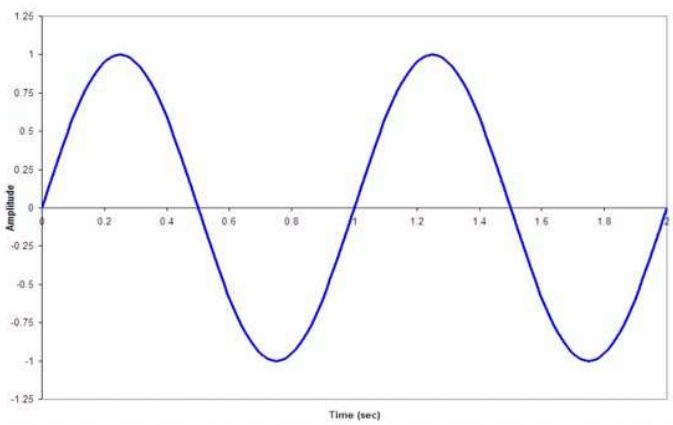
Dry/Wet Output

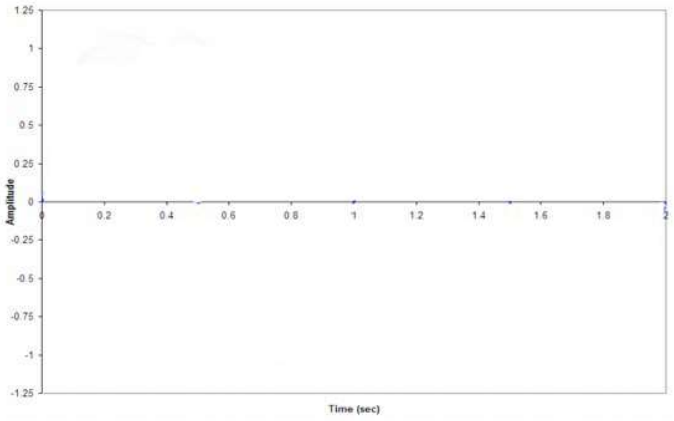
Flutter Rate/Intensity

Task 25

1. What is distortion?

2. Below is a sine wave. On your blank graph draw the same sine wave after hard clipping.

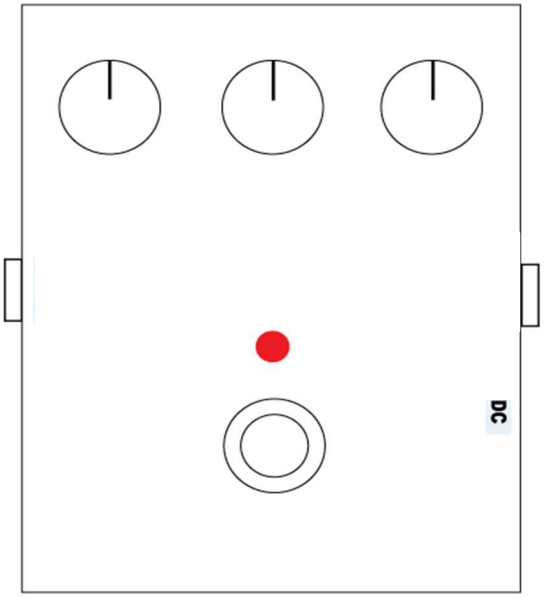




3. What happens to the dynamic range of a signal when it is distorted?

4. What is added to a signal when it is distorted?

5. Label the controls on the distortion pedal below. (6)



Task 26

Distortion Type	Explanation/Example
Tape Saturation	
Valve Saturation	
Clipping	
Overdrive	
Fuzz	
Bitcrusher	

Task 27

1. The frequency of the sample is 294Hz. Calculate the frequency of a note an octave higher. Show your working.

2. Convert the following velocities to binary.

Velocity	Velocity in Binary
113	01110001
65	
114	
94	
44	
127	

3. The project tempo is 120 BPM. Work out the delay time for (Show your working):
    a. 1/4 notes (crotchet)

    b. 1/8 notes (quaver)

    c. 1/16 notes (semi-quaver)

    d. 1/2 notes (minim)

4. Fill in the correct measurement of each unit:

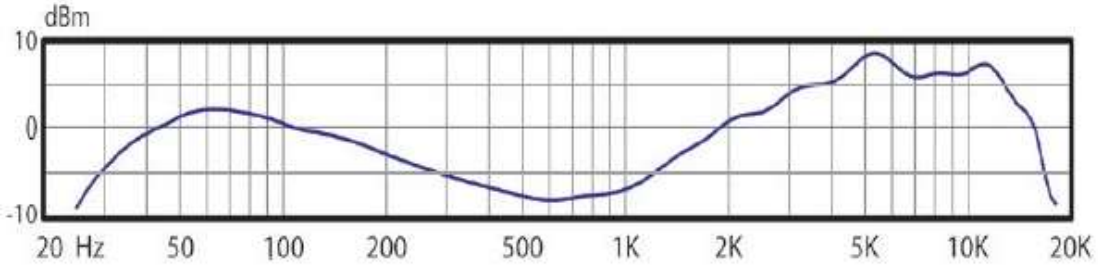
Unit	**Measurement**
Level / Volume / Gain / Amplitude	
Frequency	
Delay Time	
Tempo	
Synthesiser Octaves	
Course Tuning	
Fine Tuning	
Feedback / Wet / Mix	

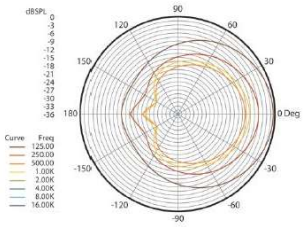
Task 28

Recording Type	Explanation/Example
Early Recording Pre 1930	
Direct to Tape Mono Recording 1930-1963	
Early Multitrack Recording 1964-1969	
Large-scale multitrack recording 1969-1995	
Digital recording and sequencing 1980 – present day	
Digital Audio Workstations & emerging technologies 1996 - present day	

Task 29

Below is the frequency response graph and polar pattern for a dynamic microphone.

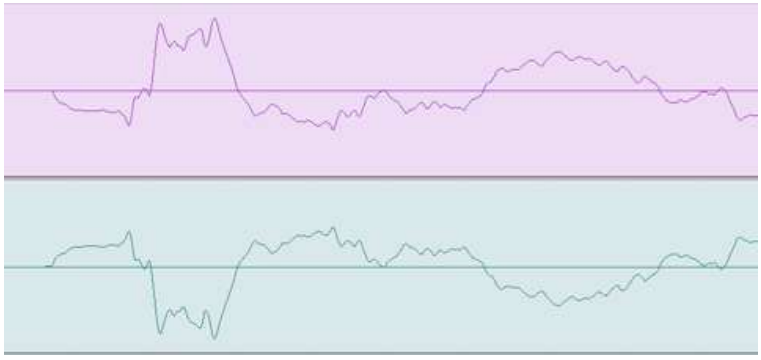




Evaluate the suitability of this microphone for recording a kick drum in a metal recording. (8)

Task 30

Below is an image of a snare drum recording, using a microphone on the top and bottom of the snare drum, 180º opposite each other.



1. Describe how these two tracks played together would sound. (2)

_____

_____

2. Explain why this happens. (3)

_____

_____

_____

3. What would you need to do in order to fix this problem. (1)

_____

4. When recording using more than one microphone, engineers must consider phase relationships. What is phase relationship? (2)

_____

_____

Below is a photograph of a spaced pair overhead drum recording.

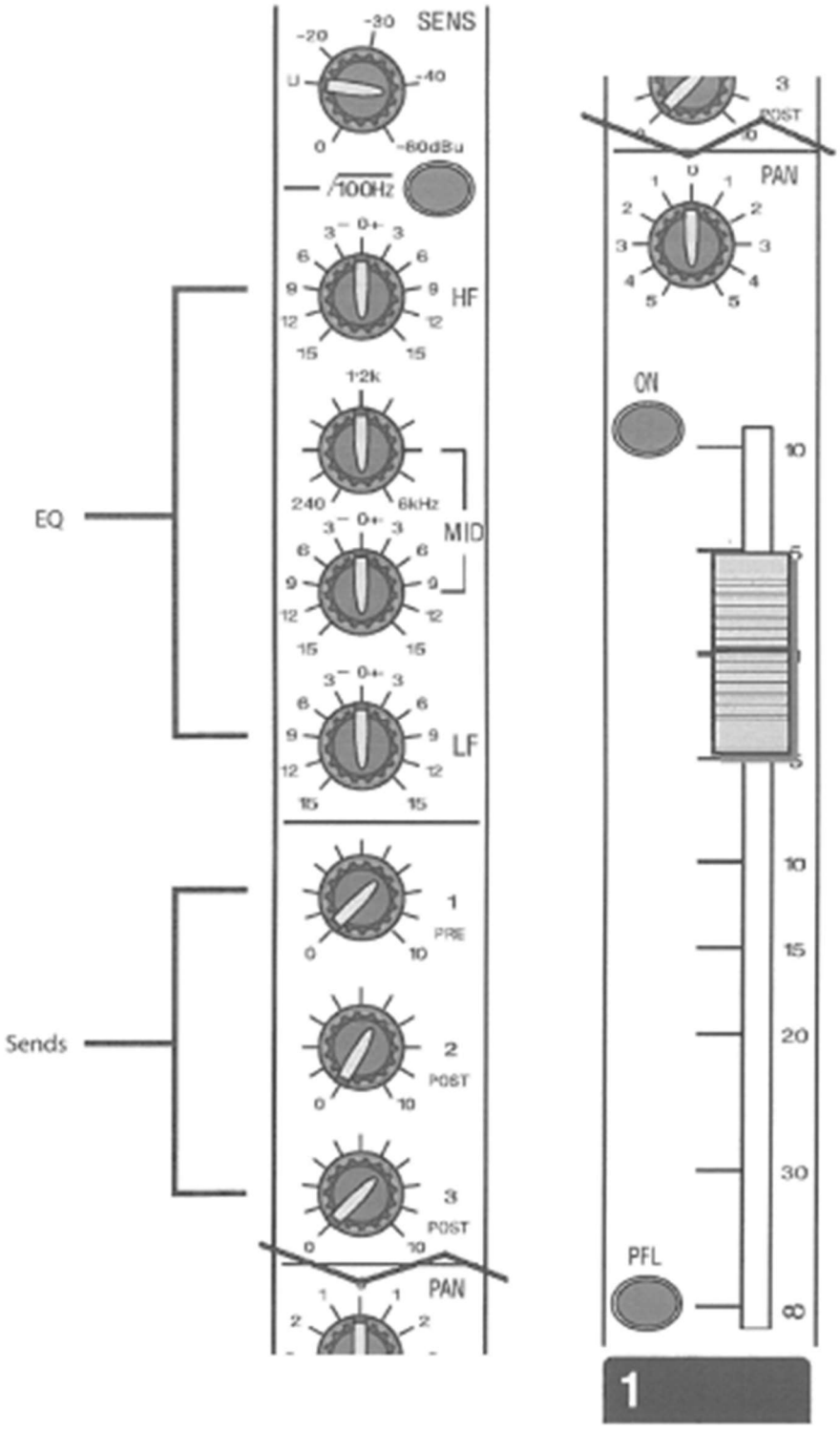
5. What would the engineer need to check to make sure the two microphones had a positive phase relationship. (2)

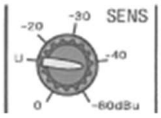
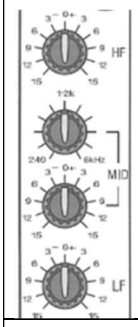
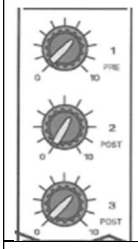
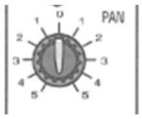
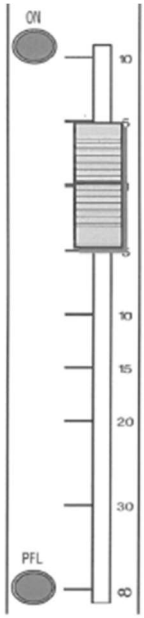
_____

_____

Task 31

Figure 1 shows a channel on an analogue mixing desk. Many of the controls are similar to those on a digital audio workstation track. Explain the function of the controls and specifications that can be seen in the picture. Give one practical use for each control.



Parameter	Function & Use
	
	
	
	
	

Task 32

Figure 1 shows an analogue synthesiser from the 1970s. Many of the controls are similar to those of a software synthesiser plug-in. Explain the function of the controls seen in Figure 1.

Parameter	Function/Explanation